

48S Abstracts

tion for axillary artery inflow [n=2], or a translocated reversed saphenous vein [n=1].

Results: Twenty-five patients with a mean age of 57 years (range 26-83) underwent successful primary axillary artery inflow procedures during a 31 month period. Of these, 19 (76%) were female and 20 (80%) were diabetic. Seventeen (68%) had previous vascular access procedures and nine (36%) were obese. One access failed after 4 weeks and could not be salvaged. Two individuals died 2 and 14 months following surgery due to myocardial infarctions. Life-table primary, primary assisted, and cumulative patency rates were 79%, 95%, and 95% respectively at one year with follow-up ranging between 1-20 months (mean = 6 months).

Conclusions: Creating an autogenous vascular access utilizing axillary artery inflow is a good option for patients with severe peripheral vascular disease, offering a high patency rate and the prevention of access-related hand ischemia.

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PS80.

Significant Mechanical Puncture Resealing Properties of a Novel (Nano-Composite) Compliant Haemodialysis Access Graft Compared to ePTFE Conduit Currently in Clinical Use

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Objectives: The compliance, non-thrombogenicity and biodurability of POSS-PCU graft has been reported in vitro studies. In vivo studies reveal high patency rate at 9 months (to be published data). A further application of this graft could be in vascular access, where currently PTFE (polytetrafluoroethylene) is the prosthetic conduit of choice. Resilience to puncture with large gauge (15-17Ch) dialysis needles is vital for a graft being used as vascular access conduit. We performed ex-vivo tests to compare this specific property between POSS-PCU and PTFE grafts.

Methods: A flow circuit containing human blood was used to mimic the arterial system using a phantom pulse generator. Lengths of test graft (8-10cm) were connected to the circuit and submerged in a 2 litre isotonic (0.9%) saline bath. The pulse generator was set at 80 beats/minute. A single 15Ch dialysis needle was used to puncture the full wall thickness of the graft. Samples of saline bath were taken at distances of 2.5cm and 5cm from the puncture site at 5 minute intervals, for a period of 30 minutes. The concentration of red blood cells (cells/ litre) were

calculated at each time and location point for each graft being compared.

Results: Macroscopically, the POSS-PCU graft "self-sealed" within seconds after the initial puncture whereas the PTFE puncture site had not sealed by 30 minutes. There was about 15 times lower concentration of red blood cells seen in the samples with POSS-PCU graft compared with PTFE at both 2.5 and 5cm. POSS-PCU as compared to PTFE leaked less red blood cells over a total of 30 minutes. The results were statistically significant ($P < .0001$) when analysed with the Friedman test.

Conclusions: A significantly better resilience to needle puncture of POSS-PCU over PTFE graft suggests an improved alternative for vascular access surgery. This may result in safer, earlier needling and possibly also reflect better long term durability.

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PS82.

Graduating Vascular Surgery Trainees Have Low Self-Reported Operative Confidence for Index Procedures

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Objectives: We sought to evaluate operative experience (OE) and operative confidence (OC) levels for senior vascular surgery (VS) trainees' performance of index procedures and attitudes toward simulation.

Methods: A Web survey querying national OE (reported as range of procedures performed during VS training: 0, 1-5, 6-10, 11-20, 21-50, 51-100), self-reported OC levels (measured by Likert Scale; 0-not confident/needs close supervision, 3-somewhat confident/needs some supervision, 5-confident to perform unsupervised) and perceived need for simulation, was sent to all VS trainees. OE was compared with OC and data reported for senior (\geq PGY7) level trainees for open and endovascular procedures.

Results: A total of 183/326 (56%) responses were received; 51 (41%) of 2012 graduates. OC was higher for procedures with higher OE ($r = .78$) however 35% indicated that they feel unprepared to practice the full spectrum of open VS and many do not feel confident to perform key index procedures independently (Table). 86% believe simulation training (primarily endovascular simulation and cadaver dissections) is valuable for enhancing their surgical skill.

Conclusions: While OC levels appear to correlate with OE, many senior residents including those with higher case